Collection no. 175

K. H. L. Key & party

GLAMIS

DUPLICATE

CARBON BOOK

(Octavo Size)

Northern S. Aust. & S.E. Northern Territory. 12.ix. – 3.x.1972

100 Leaves in Duplicate

NUMBERED

Flexiflat

THERMO–PLASTIC BOUND

Collection no. 175

K.H.L. Kay & party
12.ix. – 3.x. 1972

Northern S. Aust. & S.E. Northern Territory.

12/9

1167.6. Treeless flat plain with brown self-mulching soil. Grasses, Acacia aspp. & shrubby composite ht. 0.3 m. Kyacris on lept.

168. 44-mile peg from Hay.

213.2. Turn-off to Hay (service station) S. Hay.

13/9

1571 - Gently undulating. Brown soil with calcareous limestone on surface. Atriplex vesicaria to 0.3 m, a spring, Acacia to 0.75 m, grasses & bassias.

1572.5. Turned off to Boorna on outskirts of Morgan.

592.7 Turn off to Mt. Mary Hstd.

597.2 Turn off to Robertson Eff.

597.7. The Yunns HS.

14/9. On road from Hawker north

1798.6 Rolling rocky hills & small steep creek on brown sandy loam Cuparessa Heptaeka, Acacia dimorphea, Apotropis aitata, Cratilopsis sp. 1, Caperrala, Zygophyllum sp. to 0.2 m, Kochia sp. 1, Morinbine sp. P142(3) pyramidata to 0.6 m, mc hallae to 0.6 m, occ. Rhagodia, Bassia & Solanum sp. to 0.1 m, Stipa sp. to 0.2 m & smaller grass to 0.1 m, occ. Acacia sp. in creek.

1801.8. Road in from left. Hookina Creek.

1802.3. Wonokarinis.

1808.9. Road across at angle

1812.1. Track in from left.

1813.1. ~~Mermerna~~ Ruins

1816.0 ~~Ruins, well~~ Mermerna ruins.

Caperrala sp. 1, Monistria discrepans, Stony hills & small creeks on brown sandy loam. Acacia victoriae to 3 m in creeks, Acacia dimorphea, Apotropis aitata, Kochia sedifolia to 0.3 m, Cratilopsis sp. 1, Mor. 4 sp. 1 Bassia spp. to 15 cm, sparse grasses, base ground with scattered stones & gravel. A. Gutt.

1818.4. Moralana Creek. Road in from left.

1818.9. Road to right to Wilpena Gorge

1826.1. Sandhill with brown sand. Callitris verrucosa. Acacia rubropunctata leaning K. pyramidata on slopes, with Cassia spp. & a few patches of aeolian (?) limestone concretions. Summit with a broom-like legume to 0.5 m, mainly dead. Coarse sand. A few Heterodendron on summit. Chat, Apotropis nitrata.

1826.4. Fence. Road off to right.

1828.2 Road off to right.

1829.7 Dangerous Ck.

1831.0. Marly flat plain with brown fine sandy loam bearing large patches of gibbers ½ – 4 in. Cassia spp. & Atriplex spp. Cupressa Hetacea. Maireolepholia sp. (?) few forbs to 9 in, occ. patches of a composite with mauve flowers to 6 in. in ch bare ground. Thickly scattered Acacia aneura.

1832.6. New railway joins in.

1834.1. Brachina Siding.

1834.7. Porachina Creek. ("Oversflow" on map)

1836.3. Porachina S/C. Turn off to Porachina Gorge.

1841.3. Commodore R.S.

1844.1. Fence.

1846.7. Fence

1847.0. Gentle undulations of plain with fine brown sandy loam (Cupayessa testacea) & large patches of gibbers. Atriplex vesicaria & Bassia spp. to 0.25 m, some sparse grass.

1849.0. Parachilna

1851.2. Fence

1853.1. New line veers left.

1855.3. Fence.

1858.3. Blackfellows Creek.

1863.4. Breakfast Time Ck. Broad stony creek with E. Camaldulensis (Caperrola sp.) to 50 ft & scattered Kochia & Rhagodia spp. to 0.5 m, flanked by flat plain

with a network of gibber pebbles, stones to 6 in. Atriplex & Bassia spp. to 0.3 m. Apotropis vittata, Chat. Pseudoscirtus

1866.2. Rises.

1868.7. Very broad shallow depression, among hills. Caperwale sp. 6 with brown sandy loam. Sea level. Acacia victoriae to 2 m, with Kochia & Atriplex spp. & with hop to ½ 0.5 m. Large areas of fine dark brown gravel & others of stone up to 6 in but not dense.

1869.1. Fence

1870.1. Steep limestone rocky hill, with Caperwale sp. 1, Apotropis vittata, K. sedifolia & Atriplex vesicaria to 0.3 m, Caperwale pistacea, K. spp. & Bassia spp. to 0.2 m. Brown soil, much flat stone & fine flakey gravel. Dec. with hop.

1872.1. Cross roads.

1872.3. Creek.

1872.8. Beltana P.O.

1880.0. Fence.

1880.8. Puttapa well. Steep & very rocky hillsides with K. sedifolia & A. Asbestos, Dodonaea, Caperrala sp. 1, Eremophilia sp. 2 (?), Sphingomorphus elegans (?), occasional to 0.2 m well spaced. Occ. Cupressa pitstacea. Mulga on ridge & Casuarina in amphitheatre at base in creeks. Cassia sp. at least to 15 cm., occ. Eremophila sp. to 0.6 m.

1883.1. Crossing of new railway line.

1884.0. Road off to right (Puttapa?)

1886.0. Cross under power line.

1888.0. Emu Creek.

1889.0. Windy Creek Reserve. Broad Creek with E. camaldulensis to 50ft. Sandy & gravelly bed with Caperrala sp. 1, Pycnosiphonia serialis, Beplesia sp. 2, Apotropis vittata, morabine sp. P203 & mesophytic plants, leading to Casuarina sp. to 20ft on steeply sloping banks bearing Cassia spp. & Kochia spp. to 0.2 m, & finally to a steep rocky slope with well spaced mulga, Eremophila freelingii (?) (spec.) & E. sp. (purple) length to 2m, & occ. Cassia sp. & other shrubs. Power line

mainly on E. freelingii.

15/9

1889.0 Lundy Gyp. Depart.

1894.2 Copley

1900.0 Leigh Creek. Nuytsia gittulosa

1902.0 Leigh Creek depart. sparse

1916.5. Low stony hills with K. sedifolia to 0.2 m & Bassia spp. to 0.1 m. Pale brown sandy loam. E. freelingii & Sodonaea sp. & Scirpus sp. in gullies & occ. Stipa sp. to 0.1 m. Very dry. Apotropis vittata

1917.5. Lyndhurst.

1917.9 = 1917.5

1930.2 Crossed old railway.

1933.0. Broad swampy floodway with Caperola sp. 1. Unisiella rubropunctata Atriplex nummularia & A. sp. both to 1 m. occ. Loam plain patches, annual Atriplex & Bassia sp., much bare pale brown fine sandy loam leading to red sandhill with much same vegetation. Unisiella on sandhill, Sphingomorphus on coarse sand of main

channel of watercourse.

1935.2 Tarina.

1936.4 Turn off to Wilpoorina Stn.

1946.4. Brown sandy loam to loam
Cajanus pedunculata, Capparis sp. 1,
marly flat plain, with large patches
Corchorus rugosus, Umisa gillii,
of gibbers. Cassia sp to 1.5 m, with
Atriplex vesicaria, Opuntia macrorhiza,
Eremophila sp. to 0.5 m in lower areas,
Grass not sp. 1, Cottifera variegata (E)
with Bassia spp., Atriplex spp. & other
plants to 0.2 m; grass in patches fairly
dense, but mainly dead, to 15 cm.

1953.1. Turn off to Mundowna on left

1961.1. Depression with patchy grey-brown
Capparis sp. 1 & Gomphrena australasica (E) to
fairly sandy loam. Ultrasic schistes
0.5 m with patches Bassia spp. & Atriplex to 10 cm,
Stipa sp. to 20 cm. Dec. patches sparse
above.

1962.6. Tank.

1964.4 Road to Mundowna Stn to right.

1969.6. Junction with Birdsville track.

1970.3. Marree

1972.4 = 1969.6

1974.1 The Frome flood plain.

1975.6. Main channel. Camp

1979.

1982.6. Fence

1985.5. Waterourse.

1988.6 Waterourse.

1991.3. Nor' East Cliff. Flat-topped hill
Acacia gutturosa (?) step rocky Aristida
Ca. 150 ft, rocky top & sides, north-west
rubropunctata, Series nov. sp. 1 (?)
side mainly brown sand; also surrounding
gibber plain with extensive areas
of stone & gravel. Acacia spp. &
Atriplex sp. to 8 in, occ. beaniy bowoed
succulent shrublets to 10 in, dead grass
in patches to 8 in.

1991.9. Lake Harry 1.5.

1999.8. Dog fence.

2006.0. River Clayton. Coolibah to 30 ft
Apotropis bitbata; Pycnoptichus spiatus.
along channel. Sandhills with brown
Series nov. 4 sp. 1, Aristida sp. 4
sand, Chloptochloa & Neteria to 1 m,
scattered Acacia sp. to 1.6 m. On flat
extensive patches of polished stones,

[illegible] brown sand, with [illegible] opp. [illegible]
[illegible] "Helelupsum" to [illegible]
[illegible]

A. gutt., Chert.

009.1. Fence.

[illegible]

[illegible] Creek.
[illegible]

1-2 mi. Rocks in creek, occ. patches
[illegible]

Macrolophalia sp. 1

[illegible]

024.9. Melt in left.

036.0. [illegible] between two [illegible]
[illegible] Schizolothrus
[illegible]
[illegible] 5 [illegible]
[illegible]
[illegible]

[illegible] to 1 m. [illegible] to 0.6 m. [illegible]

[illegible] of many species, including [illegible]

[illegible] Helianthemum to 10 in.

[illegible]

[illegible]

047.1. Flat plain with fine brown [illegible]
Coppersla sp. 1, Co[illegible]a varnicosa
[illegible] fine pebbles.
Cho[illegible]ites leptinuffra
Scattered shrublets to 10 in, [illegible]

[illegible]

[illegible] N.S.

052.0. Rock on main road.

06[illegible].6. [illegible] Plain.

061.7. Camp.

[illegible]

[illegible]

063.6. [illegible]
Camp.

064.0. Road in from right ("flood [illegible]

[illegible] 3. [illegible]

065.9. Survey marker.

068.2. Road [illegible] camp.

patches dead grass to 9 in. Scattered

Store

083.2 Quadrta wagulata

Eragrostis to 0.7m, Acacia spp. (3) to 2m

083.7

Chloris varia

Chiost. grass to 2 in

2107.2

[illegible]

[illegible]

[illegible] shrubbets to 20 cm,

[illegible] Aniseed sp. x Acacia

[illegible] cane grass to 1m,

[illegible]

124.3 [illegible]

131.[illegible] [illegible] sp. 1 (♂)

[illegible]

[illegible]

135.7 [illegible] x H.

137.7 [illegible]

140.4 Casuarina 115.

146.7 Kalamunda. Kitson.

[illegible] of Wardbutton

[illegible], Pygmy [illegible]

[illegible] serratus, Aiolopus thalassinus

[illegible] with 10-ft-deep holes
[illegible] to 30 ft open, [illegible] to
[illegible]
[illegible] plen. Bassia spp. to 0.2 m.
Olivaceous [illegible] sandhill with
[illegible] to 0.7 m. [illegible] between the
[illegible]
[illegible]
133. [illegible]
135.7 [illegible]
[illegible]
22.11 [illegible]
204.7. [illegible] ft.
[illegible]
[illegible]
[illegible]
[illegible]
to [illegible]
with the [illegible]
[illegible]

[illegible]

[illegible] Erg[illegible]

210.0. Watercourse leading to Lake [illegible]

215.0. Ditto.

[illegible]

[illegible] Perspective [illegible]

[illegible]

[illegible] cream [illegible]

[illegible] podium; [illegible] gypsum [illegible]

[illegible] 1.3 m, with [illegible] corner of [illegible]

[illegible]

[illegible] Erg depression.

[illegible] Watercourse.

[illegible] Watercourse.

235.0 [illegible] Season (hill) [illegible]

[illegible]

[illegible]

[illegible] Cairo [illegible]

[illegible]

[illegible]

238.5 Mt. Tison Moore.

[illegible]

241.2 Sandhill on right.

[illegible] right.

240 5.6 Ditto

[illegible] on left.

[illegible]

[illegible]

[illegible]

[illegible] Koelria cristata [illegible]

[illegible]

[illegible]

[illegible]

[illegible] Ditto

262.0. Road sharp right.

267.6. Clifton Hall [illegible] to right.

[illegible]

Clifton Hall's Lagoon plain.

[illegible]

270.9. Road left fork.

278.5. Thread off to left.

278.7. Ditto

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] left ground [illegible]

[illegible] on right.

[illegible] with pale [illegible] Pygnotichus [illegible]

[illegible] to 4 m, [illegible]

[illegible] to 1 m, "[illegible]" up to 0.3 m, dead [illegible]

remnants of animal Atrypella sp. [illegible]

[illegible]

[illegible]

335.6 Rejoin B. track.

[illegible] Turned left.

339.6. [illegible] notice, [illegible] left.

340.0. [illegible] right to [illegible]

[illegible] SE.

3265 Camp.

self-mottling gray

purplish

pale brown

flow displain

partly flooded

21/9

[illegible]

[illegible] sp. 1, [illegible]

[illegible]

[illegible]

gulfer with U. vesicaria sp. 1.

grasses to 0.3 m. Pale brown soil.

Buforania (?) on gibbers.

[illegible]

721.1. Rock Ck.

[illegible]

[illegible] Albania Creek Rd, Sta.

[illegible]

[illegible]

[illegible] basalt to [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Rocky middle [illegible]

[illegible]

(?)

Bearford Oval

[illegible]

[illegible]

[illegible] to 15 m.

[illegible] Strangewa

Smaabelli

Amisa

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Cypraea testacea,

[illegible]

[illegible]

Australia

adjacent

[illegible] and [illegible] A. [illegible]
occasional or c. con. positive to 0.3 m;
Patchella & other grasses sparse to
0.2 m. Mesembrian in [illegible] (occ.
abundant).

[illegible]

[illegible] Glycyrrhiza sp. [illegible]
[illegible] large
[illegible] Austrocrinis gilli [illegible]
[illegible] & large.
[illegible]

[illegible] false, & bracts to
[illegible] grasses & annuals to 10 cm.
[illegible] other genus on large gilt.

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

9u1.3 Int. Dutton landing.

9u1.0. Bend left.

9u6.4. Turn round.

9u[illegible] Turned off to left. CAMP.
[illegible] liferavar[illegible] [illegible]
[illegible] sandhills [illegible]

[illegible]

heterogenophylla & H. spp (2) [illegible] cm.
Cassia sp.

[illegible]

[illegible]

feed on sandhills [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

9u1.6 Rattling pebbles downs on broiw
Thorbinfeld [illegible] [illegible]
[illegible] of colour [illegible]
moraceae sp. (♂) [illegible]
[illegible] shore to 0.3m,
[illegible] area of bassias to [illegible]
incl. Notrebla sp. [illegible]

[illegible] with [illegible] of [illegible]
[illegible]. Small grasshoppers can be [illegible]

[illegible] Creek.

959.9 Alland [illegible]
[illegible]
[illegible]

A. cambagei to 15 ft.

966.9. Strong Creek.

972.1. Ordnadatta.

973.7. Ordnadatta depart.

974.6. Track on left.

[illegible] off to [illegible].

978.4. Road off to left.

979.1. Track off to right. [illegible]

[illegible] Creek

[illegible] Road off to [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Gr 5 3

[illegible]

Umbrella sp. 1, U. [illegible]
Hakea [illegible] to 3m, [illegible]
[illegible] Cassia sp.
[illegible] ochracea, [illegible]
to 2m [illegible]

[illegible] 0 m, [illegible]

[illegible] to 15 cm.

[illegible] clay [illegible]

Gr 5 5 [illegible]

[illegible]

[illegible]

[illegible] shale bearing [illegible]
[illegible]

[illegible]

[illegible]

[illegible]

30.7.0 C.M.

[illegible]

[illegible] to gather to the island [illegible]

[illegible]

2879

[illegible] Turk off to Night

[illegible] on left.

[illegible]

Cassia nemophila A. Cunn. (= eremophila)

[illegible]

Euphorbia sp. to 0.2 m., [illegible]

[illegible]

[illegible] N.S.

[illegible] Weathered.

[illegible] Road [illegible]

[illegible] (Cumulus [illegible]) density.

[illegible] nummifera

[illegible] varying to 0.3 m + hassias, with

[illegible] hobbles up to 0.3 m, but varying

[illegible] more generally distributed.

[illegible]

[illegible] Down on right.

[illegible] Crest.

[illegible] Crest, up hobbles to left of road.

[illegible] Crest.

[illegible] Crest.

[illegible] Crest.

[illegible]

[illegible] Crest.

[illegible]

[illegible] Down off to left to waterhole (?)

[illegible]

[illegible] hobbles

[illegible]

[illegible] Ornithogalum [illegible] Rhododendron [illegible] Erica [illegible]

[illegible]

071.0 Track right fork. = 70.7

[illegible]

072.4 Gate

[illegible]

Shrubberies.

076.3 Road in front left.

076.7 Road in front left. Point of crossing of [illegible].

080.3 Road in front L.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Arnisa guttulata, [illegible]

[illegible] leading to [illegible]

Cattleya [illegible]

Arrapida browniana Hens.

[illegible]

[illegible] Yard on Cpt.

[illegible] Turnbull.

[illegible] Cpt

[illegible] The Lindsay

[illegible] Tropic Cpt book.

[illegible]

[illegible] Cane. Land [illegible] Australian [illegible] large [illegible] Coryphistes [illegible] Australian [illegible] Melaleuca, [illegible] sp. 1 (?). [illegible] incl. Nabrada sp.

[illegible]

[illegible]

[illegible]

104.8 [illegible] Ck Dam [illegible]

[illegible]

[illegible] round shape [illegible] to clean.

[illegible] Terminifera [illegible]

[illegible] monostichus segiatus, Chlorionesectum nigrifera [illegible] Urnisella tuberopunctata, Urnisa [illegible]

[illegible]

[illegible]

Uniscella

Uniscella rubropunctata

Papilionaceae

Uniscella

sp. Pitta sp.

Tapeinata, Peneo.

Genus nov. 75

Genus nov. 95

3 in 34·4 = 3 L 25·1

3 L 26·6 Comm.

incl. Cortaderia dissitiflora Benth. (s. l.)

h

lfw

268.1

h

[illegible]

[illegible] vitata, [illegible]

[illegible]

[illegible] morobrinc spp. P87, P89, P[illegible]

[illegible] to 18 in, [illegible]

among grasses

Eragrostis laniflora Benth.

the Warrawunga [illegible]

[illegible] Sandersbrook.

[illegible] Snake.

[illegible]

[illegible] Pycnostichus [illegible]

[illegible]

[illegible]

(The Hamilton)

Urnisa [illegible]

[illegible] Salsola to 1 ft, [illegible]

Cassia sb. Red sand. Acacia [illegible]

grasses. Urnisa gutt. Acacia gutt.

[illegible] Hakea corna to 2 m. Ground [illegible] Stable [illegible] some grass around base of rocks

[illegible]

503.4 Bridge on road.

507.7 Bowen R.

[illegible]

[illegible]

[illegible] Trees [illegible]

[illegible] Trees [illegible]

[illegible] Urnisa gulbiosa, [illegible]

nov. 95, [illegible], Microla sp. 2

[illegible]

[illegible]

[illegible] off [illegible] 145?

3W1.5. Carraway. Pair on L.

3W5.5. Fence. Trees off to L.

[illegible]

3W7.1. Fence.

[illegible] nov. 48 sp. 1, Cephaulioqua [illegible]

[illegible] adjacent sand [illegible]

Collitera varregata, Urnisella [illegible]

Red-brown sand. [illegible]

[illegible] nov. 95 sp. 1, [illegible]

[illegible] Urnisa gulbiosa, Pyrgoscidia [illegible]

[illegible]

Aristida contorta F. Muell.

[illegible] sp. Anisoba sp. to 10m [illegible]

[illegible] sp. Pw11a/9.

[illegible] sp. + Dodonaea sp. [illegible]

[illegible] Trachia & also [illegible]

[illegible]

[illegible]

[illegible] 9. Road off to R.

[illegible] 5518. [illegible]

[illegible] 1. Turn off to [illegible]

[illegible] distal, Pygeum [illegible]

[illegible]

to 2in. occ. Cassia sp. to 0.5 m. [illegible]

to 8in. frequent, patches of Helichrysum

& other forbs to 8in. Trees no. [illegible]

567.2. Road off to L.

[illegible] rocky ridges with [illegible]

[illegible] Dodonaea, Myrsine

[illegible] & major edge [illegible]

[illegible] sp. [illegible] Callitris

[illegible] Also [illegible]

[illegible] Pygeum [illegible]

[illegible] to 1m. [illegible]

[illegible] sp. [illegible]

[illegible] Acacia sp.

[illegible]

Eragrostis lanflora

[illegible] Wgarangga

Benth. (~~[illegible]~~ / on this) ~~[illegible]~~

[illegible]

Stropheodonta [illegible]

[illegible] Decortaria sp. 2,

[illegible] sp. 4, Macropistha [illegible]

Chonetes [illegible] Warrawanga sp. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Cornulites [illegible]

Cornulites [illegible] Coleolus [illegible]

[illegible] sp. [illegible]

[illegible]

Plectrachne melvilli C.E. Hill

[illegible] flat [illegible] Plymouth [illegible] brecciated [illegible] and E. [illegible] to soft.

Nodia Hasetonii, Arnetella [illegible]

[illegible]. Red brown sand. Moss [illegible]

o [illegible] tricolida (1) × the grass, Freesia (2)

P. [illegible] sicaturus tenuis.

667.2 Fence.

670.5 Orange Ck.

Monistria pustulifera from Shirley
Dean was on "Prostanthera sp." (N.B.
Monotoca sp. P16 which was on Acacia leptopoda
exaltata (R.Br.) Domin.

At one place at Midhills the young plant
type rich specimens as well as the
more [illegible] consists usually of
several main stems bearing very rigid
[illegible], recurved phyllodes significantly
[illegible] at the base, a formidable
obstacle to any potential browser. The
[illegible] of leaves & terminal branchlets are
pendulous, the leaf longer & [illegible]
[illegible] blue point. In addition to young
specimens, there are many instances of
[illegible] growth of juvenile type from stumps
of quite old trees (6 in. or more diameter)
of only a few feet in height & [illegible] a few cm.
[illegible] juvenile-type shoots from the
base. Although most adult trees have
a single stem, some have two or
three of equal size. Branching of the
juvenile growth indicates a [illegible]
growth of 2-3 in. between branchings
& this is presumably the average

[illegible] measurement the tree was
[illegible] on which side of its trunk branches
[illegible] had been cut with an axe
[illegible] ca. 2ft. lateral shoots had emerged
[illegible] the cut & these had reached
[illegible] height of ca. 13ft. they were pointing
[illegible] across the direction of strike of the
[illegible] so that the cut could not have
[illegible] made had they been present at
[illegible] time of cutting. Since Anhang
[illegible] settled in 1920, this represents an
[illegible] growth of 13ft in 50 years, or a
[illegible] with a side branch at ca. 4ft.
[illegible] year. A large tree fact 3269. 8. had
[illegible] ~~diameter~~ of ca. 6ft. at ca. 1.6m. from
[illegible] ground. Rabbits were said to
[illegible] these trees, so no
[illegible] of them could be found. The trees
[illegible] likely that they would
[illegible] the young plant was [illegible]
[illegible] height. Lateral [illegible]
from the saplings tend to collapse

[illegible] further increase
[illegible] prior to the stem
[illegible] seems amazingly
[illegible] in its environment.
[illegible] 6
[illegible] to all ages from [illegible]
[illegible] Still younger may be
[illegible] sufficient to ensure
[illegible] of the [illegible]
the absence of direct human
[illegible]. Growth rate of tree
[illegible] trees may be greater than [illegible] the
[illegible] spring and since the [illegible]
[illegible] of the pendulous branches
[illegible] much greater lateral branches
[illegible], we do not know the rate
[illegible] straightening of the branches.
[illegible] of the highest trees at 3769 & was
[illegible] to be 40 ft. giving a tree
[illegible] of ca. 160 yr at 3 in./yr.